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- (71) Applicant (*for all designated States except US*): DSM IP ASSETS B.V. [NL/NL]; Het Overloon 1, NL-6411 TE Heerlen (NL).
- (72) Inventors; and
- (75) Inventors/Applicants (*for US only*): SCHAAP, Albert [NL/NL]; Smitshoek 13A, NL-2993 BG Barendrecht (NL). VERKOEIJEN, Daniel [NL/NL]; Pootstraat 111, NL-2613 PH Delft (NL).
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(54) Title: PASTEURISATION PROCESS FOR MICROBIAL CELLS AND MICROBIAL OIL

(57) **Abstract:** An improved pasteurisation protocol for pasteurising microbial cells is disclosed. The protocol has three stages, a first heating stage, a second plateau stage at which the cells are held at a (maximum and) constant temperature, and a third cooling stage. Both the heating and the cooling stages are rapid, with the temperature of the cells passing through 40 to 80 °C in no more than 30 minutes in the heating stage. The heating rate is at least 0.5 °C/minute and during cooling is at least -0.5 °C/minute. The plateau maximum temperature is from 70 to 85 °C. By plotting the pasteurisation protocol on a time (t, minutes) versus temperature (T, °C) graph, one obtains a trapezium having an area less than 13,000 °C minute. Not only does this result in a smaller energy input (and so a reduction in costs), but a better quality (and less oxidised) oil results having a peroxide value (POV) of less than 1.5 and an anisidine value (AnV) of less than 1.0.

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